Issuance Date: February 1, 2009
Effective Date: February 1, 2009
Expiration Date: February 1, 2013

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT No. WA-000062-1

State of Washington
DEPARTMENT OF ECOLOGY
Olympia, Washington 98504-7600

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1342 et seq.

Kimberly-Clark Worldwide, Inc.
2600 Federal Avenue
Everett, Washington 98201
File: KC NPDES Permit Nov 11, 2008

is authorized to discharge in accordance with the Special and General Conditions that follow.

Facility Location: Everett, Washington	Receiving Water: Possession Sound	
Water Body I.D. No.: 03-07-09	Industry Type: Sulfite Pulp and Paper Mill	
Discharge Locations:		
Outfall 100	Outfall 003	Outfall 008
Latitude: 47° 58' 10" N	Latitude: 47° 59' 03" N	Latitude: 47° 59' 18" N
Longitude: 122° 14' 46" W	Longitude: 122° 13' 08" W	Longitude: 122° 13' 06" W

is authorized to discharge in accordance with the special and general conditions which follow.

Merley F. McCall
Industrial Section Supervisor
Washington State Department of Ecology

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SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S3.A	Discharge Monitoring Report	Monthly	
S3.E	Noncompliance Notification	As necessary	
S3.E	Shellfish Protection	As necessary	
S4.A	Treatment System Operating Plan	As necessary	Within 180 days of permit effective date (August 3, 2009)
S4.B	Reporting Bypasses	As necessary	
S5.	Application for Permit Renewal	1/permit cycle	At least 180 days before permit expiration date (July 31, 2013)
S7.C	Solid Waste Control Plan	1/permit cycle	Within 180 days of permit effective date (August 3, 2009
S7.C	Modification to Solid Waste Plan	As necessary	At least 30 days prior to implementation
S9.	Spill Plan	1/permit cycle, updates submitted as necessary	Within 180 days of permit effective date (August 3, 2009)
S11.	Best Management Practices Plan	As necessary	
S12.	Outfall Evaluation	**1**/permit cycle	With Renewal Application
S13.	Priority Pollutant Scan	**2nd**, **3rd**, and **4th** year of **permit** cycle	With Renewal Application
S14.A	Acute Toxicity Tests Characterization Summary Report	1/permit cycle	With Renewal Application
S15.A	Chronic Toxicity Tests Characterization Summary Report	1/permit cycle	With Renewal Application

Permit Section	Submittal	Frequency	First Submittal Date
G1.	Signature Requirements	As necessary	
G4.	Reporting Planned Changes	As necessary	
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G21.	Compliance Schedules	As necessary	

SPECIAL CONDITIONS

In this permit the word "must" denotes an action that is mandatory and is equivalent to the word "shall" used in previous permits.

S1. DISCHARGE LIMITS

A. Process Wastewater Discharges

All discharges and activities authorized by this permit must be consistent with the terms and conditions of this permit.

The discharge of any of the following pollutants more frequently than, or at a level in excess of that identified and authorized by this permit violates the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge treated process wastewater, storm water, and non-contact cooling water from outfall 100 at the permitted location subject to complying with the limits specified below. The Permittee is authorized to discharge treated process wastewater, storm water, and non-contact cooling water from outfalls, 003, and 008 in emergencies and shutdowns.

EFFLUENT LIMITS: OUTFALL # 100		
Parameter	**Average Monthly [a]**	**Maximum Daily [b]**
Flow [c]	NA	NA
Biochemical Oxygen Demand (5-day)	16,332 Lbs./day	31,316 Lbs./day
Total Suspended Solids	23,138 Lbs./day	43,530 Lbs./day
AOX	1,500 Lbs./day	2,500 Lbs./day
pH [e]	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0.	

a	Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured.
b	Maximum daily effluent limit means the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limits expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day. This does not apply to pH.
c	Ecology uses the flow data submitted in the application to set permit fees. The Permittee

	must report to Ecology when actual flows exceed the values reported on the permit application.
c	Ecology uses the flow data submitted in the approved engineering report and as included in the Facility Loading Condition (S_) to set permit fees.
d	To calculate the average monthly and average weekly values for fecal coliforms you must use the geometric mean. Ecology gives directions to calculate this value in publication No. 04-10-020, *Information Manual for Treatment Plant Operators* available at: http://www.ecy.wa.gov/pubs/0410020.pdf
e	Indicates the range of permitted values. When pH is continuously monitored, excursions between 4.0 and 5.0, or 9.0 and 10.0 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 26 minutes per month. Any excursions below 4.0 and above 10.0 for more than ten (10) minutes are violations. The instantaneous maximum and minimum pH shall be reported monthly.

B. Bleach Plant Effluent Compliance Parameters:

Compounds	Method	Limit
2,3,7,8-TCDD[1]	1613	< 10 pg/L
2,3,7,8-TCDF[1]	1613	< 10 pg/L
Trichlorosyringol	1653	< 2.5 µg/L
3,4,5-Trichlorocatechol	1653	< 5.0 µg/L
3,4,6-Trichlorocatechol	1653	< 5.0 µg/L
3,4,5-Trichloroguaiacol	1653	< 2.5 µg/L
3,4,6-Trichloroguaiacol	1653	< 2.5 µg/L
4,5,6-Trichloroguaiacol	1653	< 2.5 µg/L
2,4,5-Trichlorophenol	1653	< 2.5 µg/L
2,4,6-Trichlorophenol	1653	< 2.5 µg/L
Tetrachlorocatechol	1653	< 5.0 µg/L
Tetrachloroguaiacol	1653	< 5.0 µg/L
2,3,4,6-Tetrachlorophenol	1653	< 2.5 µg/L
Pentachlorophenol	1653	< 5.0 µg/L

1 TCDD is defined as 2,3,7,8-tetrachlorodibenzo-p-dioxin and TCDF is defined as 2,3,7,8-tetrachlorodibenzofuran. The above listed concentration represents the minimum level (as defined in 40 CFR 430.01(i)) for this pollutant. Analysis including sample containers and QA/QC shall be conducted in accordance with Method 1613: Tetra-through Octa- Chlorinated

dioxins and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A of an approved equivalent.

C. Mixing Zone Authorization

The following paragraphs define the maximum boundaries of the mixing zone(s) for Outfall 100:

Chronic Mixing Zone

WAC 173-201A-400(7)(b)(i) specifies mixing zones must not extend in any horizontal direction from the discharge ports for a distance greater than 200 feet plus the depth of water over the discharge ports as measured during mean lower low water (MLLW). Given a MLLW water depth of 350 feet (106.7 meters) for the Permittee's outfall, the horizontal distance therefore is 550 feet (167.6 meters). The mixing zone is a circle with radius of 550 feet (167.6 meters) measured from the center of each discharge port. The mixing zone extends from the seabed to the top of the water surface. Chronic aquatic life criteria and human health criteria must be met at the edge of the chronic zone.

Acute Mixing Zone

WAC 173-201A-400(8)(b) specifies that in estuarine waters a zone where acute criteria may be exceeded must not extend beyond 10% of the distance established for the maximum or chronic zone as measured independently from the discharge ports. The acute mixing zone is a circle with radius of 55 feet (16.8 meters) measured from the center of each discharge port. The mixing zone extends from the seabed to the top of the water surface. Acute aquatic life criteria must be met at the edge of the acute zone.

Available Dilution (dilution factor)	
Acute Aquatic Life Criteria	156
Chronic Aquatic Life Criteria	696
Human Health Criteria - Carcinogen	696
Human Health Criteria - Non-carcinogen	696

S2. MONITORING REQUIREMENTS

A. Monitoring Schedule

The Permittee must monitor in accordance with the following schedule and must use the laboratory method, detection level (DL), and quantitation level (QL) specified in Appendix A. Alternative methods from 40 CFR Part 136 are acceptable if the DL and QL are equivalent to those specified in Appendix A:

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Final KC Wastewater Effluent	Flow	MGD	Final KC effluent from all active outfalls[8]	Continuous[1]	24 hr integrated
"	BOD_5	mg/L	"	Daily	24 hr composite
"	TSS	mg/L	"	Daily	"
"	pH (See Below)	Standard Units	"	Continuous	Instantaneous
For pH. The Permittee must record and report the: • Number of minutes the pH value measured below or above the permitted range for each day. • Total minutes for the month. • Periods when values were above and below the permitted range separately. Monthly instantaneous maximum and minimum pH.					
"	Temperature	Degree Fahrenheit	"	Continuous	Instantaneous
"	2,3,7,8-TCDD	pg/L - ppq	"	Yearly	24 hr composite
"	2,3,7,8-TCDF	pg/L - ppq	"	Yearly	"
"	AOX	mg/L	"	Quarterly[7]	"

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Paper machine room	Production[2]	Tons/day	Off the machine	Continuous	24 hr integrated
Bleach plant effluent	2,3,7,8-TCDD	pg/L - ppq	Final Bleach plant effluent	Quarterly	24 hr composite
"	2,3,7,8-TCDF	pg/L - ppq	"	Quarterly	"
"	Trichlorosyringol	µg/l	"	Quarterly	"
	4,5,6-Trichloroguaiacol	µg/l	"	Quarterly	"
"	3,4,5-Trichlorocatechol	µg/l	"	Quarterly	"
"	3,4,6-Trichlorocatechol	µg/l	"	Quarterly	"
"	3,4,5-Trichloroguaiacol	µg/l	"	Quarterly	"
"	3,4,6-Trichloroguaiacol	µg/l	"	Quarterly	"
	4,5,6-Trichloroguaiacol	µg/l	"	Quarterly	"
"	2,4,5-Trichlorophenol	µg/l	"	Quarterly	"
"	2,4,6-Trichlorophenol	µg/l	"	Quarterly	"
"	Tetrachlorocatechol	µg/l	"	Quarterly	"
	Tetrachloroguaiacol	µg/l	"	Quarterly	"
"	Pentachlorophenol	µg/l	"	Quarterly	"
"	2,3,4,6-Tetrachlorophenol	µg/l	"	Quarterly	"
"	Chloroform	mg/l	"	Monthly	24 hr composite[3]

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Secondary sludge[4]	2,3,7,8-TCDD	µg/L - ppt	Waste sludge line	Yearly	Grab
WET Testing	As specified in Permit Conditions S14 & S15				
Outfall 100	Effluent Testing	Acute Toxicity	Final Effluent	Twice during permit term	24 hour composite
Outfall 100	Effluent Testing	Chronic Toxicity	Final Effluent	Biannually during permit term	24 hour composite
Outfall 100	Fecal coliform	#CFU/100 ml	Final Effluent	Monthly	Grab
Use of outfall 003 & 008	Record of use [6]	Date and total time	Discharge	Monthly	Records

[1] Continuous means uninterrupted - except for brief lengths of time for calibration, power failure, or for unanticipated equipment repair or maintenance. Samples shall be taken every 6 hours and composited when continuous monitoring is not possible.

[2] The average and daily maximum tons/day of sulfite pulp produced and the tons/day purchased pulp consumed for non-integrated tissue shall be reported on the monthly discharge monitoring report.

[3] The 24 hour composite samples for chloroform shall be taken every 6 hours and quantitatively composited in the laboratory. The Permittee shall include a detailed description of the method used to composite the sample with the first report, and with subsequent reports if the compositing method has been modified. If an automated continuous or grab compositing device is used, the report shall include a description of the system and the name of the manufacturer.

[4] Sludge is defined as secondary treatment activated solids. Analysis of sludge samples and QA/QC, shall be conducted in accordance with Method 1613: Tetra-through Octa- Chlorinated dioxins and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A of an approved equivalent.

[5] Raw water 2,3,7,8-TCDF sampling shall be conducted during the months of May through October for the duration of the compliance schedule on the same day as bleach plant effluent 2,3,7,8-TCDF sampling.

[6] The time that Outfall 100 is bypassed and outfall 003 and/or 008 is used must be recorded to the nearest 0.1 of a hour and reported on the DMR.

[7] AOX monitoring frequency may be adjusted by Ecology five years from the effective date of the previous permit term (July 1, 2001) as allowed in 63 FR 18572, April 15, 1998.

[8] The representative sample point for treated wastewater for Outfall 100 is collected downstream of the primary and secondary effluent connection and upstream of the return line containing non-contact cooling water.

B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit must represent the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit must conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136.

C. Flow Measurement, Field Measurement, and Continuous Monitoring Devices

The Permittee must:

1. Select and use appropriate flow measurement, field measurement, and continuous monitoring devices and methods consistent with accepted scientific practices.
2. Install, calibrate, and maintain these devices to ensure the accuracy of the measurements is consistent with the accepted industry standard and the manufacturer's recommendation for that type of device.
3. If the Permittee uses micro-recording temperature devices known as thermistors it must calibrate the devices using protocols from Ecology's Quality Assurance Project Plan Development Tool (*Continuous Temperature Sampling Protocols for the Environmental Monitoring and Trends*). This document is available online at http://www.ecy.wa.gov/programs/eap/qa/docs/QAPPtool/Mod6%20Ecology%20SOPs/Protocols/ContinuousTemperatureSampling.pdf. Calibration as specified in this document is not required if the Permittee uses recording devices which are certified by the manufacturer.
4. Use field measurement devices as directed by the manufacturer and do not use reagents beyond their expiration dates.
5. Calibrate these devices at the frequency recommended by the manufacturer.
6. Calibrate flow monitoring devices at a minimum frequency of at least one calibration per year.
7. Maintain calibration records for at least three years.

D. Laboratory Accreditation

The Permittee must ensure that all monitoring data required by Ecology is prepared by a laboratory registered or accredited under the provisions of chapter 173-50 WAC, *Accreditation of Environmental Laboratories.* Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. The Permittee must obtain accreditation for conductivity and pH if it must receive accreditation or registration for other parameters.

E. Request for Reduction in Monitoring

The Permittee may request a reduction of the sampling frequency after twelve (12) months of monitoring. Ecology will review each request and at its discretion grant the request through a permit modification or when it reissues the permit.

The Permittee must:

1. Provide a written request.
2. Clearly state the parameters for which it is requesting reduced monitoring.
3. Clearly state the justification for the reduction.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee must monitor and report in accordance with the following conditions. The falsification of information submitted to Ecology is a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. The Permittee must:

1. Submit monitoring results each month.
2. Summarize, report, and submit monitoring data obtained during each monitoring period on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by Ecology.
3. Submit DMR forms monthly whether or not the facility was discharging. If the facility did not discharge during a given monitoring period, submit the form as required with the words "NO DISCHARGE" entered in place of the monitoring results.
4. Ensure that DMR forms are postmarked or received by Ecology no later than the 15th day of the month following the completed monitoring period, unless otherwise specified in this permit.
5. Submit priority pollutant analysis data no later than forty-five (45) days following the monitoring.
6. Send report(s) to Ecology at:

Water Quality Permit Coordinator
Department of Ecology
Industrial Section
PO Box 47706
Olympia, WA 98504-7600

All laboratory reports providing data for organic and metal parameters must include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/ number, method detection limit (MDL) or laboratory quantitation limit (QL or ML), reporting units, and concentration detected. Analytical results from samples sent to a contract laboratory must have information on the chain of custody, the analytical method, QA/QC results, and documentation of accreditation for the parameter.

The Permittee shall report all emergency use of outfalls 003 and 008 on the monthly DMR.

Discharge Monitoring Report forms must be submitted monthly whether or not the facility was discharging. If there was no discharge during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

B. Records Retention

The Permittee must retain records of all monitoring information for a minimum of three (3) years. Such information must include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. The Permittee must extend this period of retention during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

C. Recording of Results

For each measurement or sample taken, the Permittee must record the following information:

1. The date, exact place, method, and time of sampling or measurement.
2. The individual who performed the sampling or measurement.
3. The dates the analyses were performed.
4. The individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by Condition S2 of this permit, then the Permittee must include the results of such monitoring in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Reporting Permit Violations

The Permittee must take the following actions when it violates or is unable to comply with any permit condition:

Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance and correct the problem.

If applicable, immediately repeat sampling and analysis. Submit the results of any repeat sampling to Ecology within thirty (30) days of sampling.

Twenty-four-hour Reporting

The Permittee must report the following occurrences of noncompliance by telephone, to Ecology at the telephone numbers listed above, within 24 hours from the time the Permittee becomes aware of any of the following circumstances:

a. Any noncompliance that may endanger health or the environment, unless previously reported under subpart 1, above.

b. Any unanticipated bypass that exceeds any effluent limit in the permit (See Part S4.B., "Bypass Procedures").

c. Any **upset** that exceeds any effluent limit in the permit (See G.15, "Upset").

d. Any violation of a maximum daily or instantaneous maximum discharge limit for any of the pollutants in Section S1.A of this permit.

e. Any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limit in the permit.

3. Report Within Five Days

The Permittee must also provide a written submission within five days of the time that the Permittee becomes aware of any event required to be reported under subparts 1 or 2, above. The written submission must contain:

a. A description of the noncompliance and its cause.

b. The period of noncompliance, including exact dates and times.

c. The estimated time noncompliance is expected to continue if it has not been corrected.

d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

e. If the noncompliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.

4. Waiver of Written Reports

Ecology may waive the written report required in subpart 3, above, on a case-by-case basis upon request if a timely oral report has been received.

5. All Other Permit Violation Reporting

The Permittee must report all permit violations, which do not require immediate or within 24 hours reporting, when it submits monitoring reports for S3.A ("Reporting"). The reports must contain the information listed in paragraph E.3, above. Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

6. Report Submittal

The Permittee must submit reports to the address listed in S3.

F. Other Reporting

The Permittee must report a spill of oil or hazardous materials in accordance with the requirements of RCW 90.56.280 and chapter 173-303-145. You can obtain further instructions at the following website:
http://www.ecy.wa.gov/programs/spills/other/reportaspill.htm .

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to Ecology, it must submit such facts or information promptly.

The Permittee must submit a new application or supplement at least one hundred eighty (180) days prior to commencement of discharges, resulting from the activities listed below, which may result in permit violations. These activities include: any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility.

The Permittee must keep a copy of this permit at the facility and make it available upon request to Ecology inspectors.

S4. OPERATION AND MAINTENANCE

The Permittee must, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

The Permittee must schedule any facility maintenance, which might require interruption of wastewater treatment and degrade effluent quality, during non-critical water quality periods and carry this maintenance out in a manner approved by Ecology.

A. Treatment System Operating Plan

An updated Treatment System Operating Plan (TSOP) shall be submitted to the Department within 180 days after the effective date of the permit. The TSOP shall include the following information:

1. A baseline operating condition, which describes the operating parameters and procedures, used to meet the effluent limits of S1 at the production levels used in developing these limits.
2. In the event of production rates, which are below the baseline levels used to establish these limits, the plan must describe the operating procedures and conditions needed to maintain design treatment efficiency. The monitoring and reporting must be described in the plan.
3. In the event of an upset, due to plant maintenance activities, severe stormwater events, start ups or shut downs, or other causes, the plan must describe the operating procedures and conditions employed to mitigate the upset. The monitoring and reporting must be described in the plan.
4. A description of any regularly scheduled maintenance or repair activities at the facility which would affect the volume or character of the wastes discharged to the wastewater treatment system and a plan for monitoring and treating/controlling the discharge of maintenance-related materials (such as cleaners, degreasers, solvents, etc.).

The Permittee must submit an updated Treatment System Operating Plan to Ecology with the application for renewal. This plan must be updated and submitted, as necessary, to include requirements for any major modifications of the treatment system.

B. Bypass Procedures

This permit prohibits a bypass which is the intentional diversion of waste streams from any portion of a treatment facility. Ecology may take enforcement action against a Permittee for a bypass unless one of the following circumstances (1, 2, or 3) applies.

1. Bypass for Essential Maintenance without the Potential to Cause Violation of Permit Limits or Conditions.

   Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limits or other conditions of this permit, or adversely impact public health as determined by Ecology prior to the bypass. The Permittee must submit prior notice, if possible, at least ten (10) days before the date of the bypass.

2. Bypass which is Unavoidable, Unanticipated, and Results in Noncompliance of this Permit.

   This bypass is permitted only if:

   Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

   No feasible alternatives to the bypass exist, such as:

   - The use of auxiliary treatment facilities.
   - Retention of untreated wastes.
   - Stopping production.
   - Maintenance during normal periods of equipment downtime, but not if the Permittee should have installed adequate backup equipment in the exercise of reasonable engineering judgment to prevent a bypass.
   - Transport of untreated wastes to another treatment facility or preventative maintenance), or transport of untreated wastes to another treatment facility.

   Ecology is properly notified of the bypass as required in condition S3E of this permit.

3. If bypass is anticipated and has the potential to result in noncompliance of this permit.

   a. The Permittee must notify Ecology at least thirty (30) days before the planned date of bypass. The notice must contain:

- A description of the bypass and its cause.
- An analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.
- A cost-effectiveness analysis of alternatives including comparative resource damage assessment.
- The minimum and maximum duration of bypass under each alternative.
- A recommendation as to the preferred alternative for conducting the bypass.
- The projected date of bypass initiation.
- A statement of compliance with SEPA.
- A request for modification of water quality standards as provided for in WAC 173-201A-410, if an exceedance of any water quality standard is anticipated.
- Details of the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

b. For probable construction bypasses, the Permittee must notify Ecology of the need to bypass as early in the planning process as possible. The Permittee must consider the analysis required above during preparation of the engineering report or facilities plan and plans and specifications and must include these to the extent practical. In cases where the Permittee determines the probable need to bypass early, the Permittee must continue to analyze conditions up to and including the construction period in an effort to minimize or eliminate the bypass.

c. Ecology will consider the following prior to issuing an administrative order for this type of bypass:

    - If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
    - If feasible alternatives to bypass exist, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
    - If the Permittee planned and scheduled the bypass to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve or deny the request. Ecology will give the public an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Ecology will approve a request to bypass by issuing an administrative order under RCW 90.48.120.

C. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

S5. APPLICATION FOR PERMIT RENEWAL

The Permittee must submit an application for renewal of this permit at least 180 days prior to the specified expiration date of this permit.

S6. FACILITY LOADING

A. Design Criteria

The flows or waste loads for the permitted facility must not exceed the following design criteria sourced from Hydraulic and organic loading values from Final Engineering Plan, Hazen and Sawyer Engineers, December 27, 1977 for the secondary treatment plant:

Parameter	Design Quantity
Peak Instantaneous Design Flow (PIDF)	30 MGD
BOD5 influent loading for maximum month:	114,750 lb/day

S7. SOLID WASTES

A. Solid Waste Handling

The Permittee must handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

B. Leachate

The Permittee must not allow leachate from its solid waste material to enter state waters without providing all known, available and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee must apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

C. Solid Waste Control Plan

The Permittee must submit all proposed revisions or modifications to the solid waste control plan to Ecology for review and approval at least 30 days prior to implementation. Once approved, the Permittee must comply with any plan modifications. The Permittee must submit an update of the solid waste control plan within 180 days of the effective date of the permit.

S8. NON-ROUTINE AND UNANTICIPATED DISCHARGES

A. Beginning on the effective date of this permit, the Permittee is authorized to discharge non-routine wastewater on a case-by-case basis if approved by Ecology. Prior to any such discharge, the Permittee must contact Ecology and **at a minimum** provide the following information:

1. The proposed discharge location.

2. The nature of the activity that will generate the discharge.

3. Any alternatives to the discharge, such as reuse, storage, or recycling of the water.

4. The total volume of water it expects to discharge.

5. The results of the chemical analysis of the water. The Permittee must analyze the water for all constituents limited for the discharge. The analysis must also include hardness, any metals that are limited by water quality standards, and any other parameter deemed necessary by Ecology. All discharges must comply with the effluent limits as established in Condition S1. of this permit, water quality standards, and any other limits imposed by Ecology.

6. The date of proposed discharge.

7. The expected rate of discharge discharged, in gallons per minute. The Permittee must limit the discharge rate so it will not cause erosion of ditches or structural damage to culverts and their entrances or exits.

B. The discharge cannot proceed until Ecology has reviewed the information provided and has authorized the discharge by letter to the Permittee or by an Administrative Order. Once approved and if the proposed discharge is to a municipal storm drain, the Permittee must obtain prior approval from the municipality and notify it when it plans to discharge.

S9. SPILL PLAN

The Permittee must:

1. Submit to Ecology an update to the existing Spill Control Plan within 180 days of the effective date of the permit.

2. Review the plan at least annually and update the Spill Plan as needed.
3. Send changes to the plan to Ecology.
4. Follow the plan and any supplements throughout the term of the permit.

The spill control plan must include the following:

1. A list of all oil and petroleum products and other materials used and/or stored on site, which when spilled, or otherwise released into the environment, designate as Dangerous (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070. Include other materials used and/or stored on site which may become pollutants or cause pollution upon reaching state's waters.
2. A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.
3. A description of the reporting system the Permittee will use to alert responsible managers and legal authorities in the event of a spill.
4. A description of operator training to implement the plan.

The Permittee may submit plans and manuals required by 40 CFR Part 112, contingency plans required by Chapter 173-303 WAC, or other plans required by other agencies which meet the intent of this section.

S10. STORMWATER DISCHARGES

The Permitee is authorized to discharge treated stormwater from Outfall 100. The Permittee is authorized to discharge stormwater from parking lots and associated areas draining to outfalls 009, 010, and 011 utilizing Best Management Practices (BMPs) for the stormwater runoff from these areas and all other stormwater via outfalls 003 and 008 in emergency situations.

S11. BEST MANAGEMENT PRACTICES

The Permittee shall update their BMP plan for spent pulping liquor, management, spill prevention, and control in accordance with CFR 430.03 if there are any major changes in the pulp mill and follow the plan during the terms of the permit

S12. OUTFALL EVALUATION

The Permittee shall inspect the underwater portion of the outfall in the fourth year of the permit to document the integrity and continued function of the line. These inspections shall consist of photographic verification. A written summary of the inspection report shall be submitted to the Department with the permit application at least 180 calendar days prior to the permit expiration date.

S13. PRIORITY POLLUTANT SCAN

The Permittee shall, in the second, third, and fourth year of the permit, sample the final process wastewater effluent at Outfall 100 and analyze for the priority pollutants identified in Appendix A of this permit. Appendix A also identifies the analytical protocols that must be used and the detection or quantitation levels. Unless used on site, the Permittee only needs to analyze for the Pesticides and PCBs in Appendix A during the fourth year of the permit. The results of these analyses shall be submitted to Ecology with the permit renewal application. The data shall be listed in tabular form with the detection limit, the value including units, and the method.

S14. ACUTE TOXICITY

A. Effluent Testing

The Permittee shall test final effluent for acute toxicity at least once in the summer and at least once in the winter within two years of the February 1, 2013 permit expiration date. Results shall be submitted with permit renewal application.

Acute toxicity tests shall be conducted with both the fathead minnow and at least one of the water flea species using the most recent version of the following protocols:

Freshwater Acute Toxicity Test Species		**Method**
Fathead minnow	*Pmephales promelas*	EPA-821-R-02-012
Water flea	*Ceriodaphnia dubia, Daphnia pulex, or Daphnia magna*	EPA-821-R-02-012

B. Sampling and Reporting Requirements for Outfall 100

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on electronic media for electronic entry into the Department's database, then the Permittee shall send the current electronic media to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on 24-hour composite effluent samples. Composite samples taken for toxicity testing shall be cooled to 4° Celsius while being collected and shall be sent to the lab immediately upon completion. All other samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A. and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria.* If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.

6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.

7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the Acute Critical Effluent Concentration (ACEC) of 0.64% effluent.

8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

S15. CHRONIC TOXICITY

A. Reserved

B. Effluent Limit for Chronic Toxicity

The effluent limit for chronic toxicity is:

No toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).

The CCEC means the maximum concentration of effluent during critical conditions at the boundary of the mixing zone, defined in Section S1.Cof this permit. The CCEC equals 0.14% effluent.

C. Compliance With the Effluent Limit for Chronic Toxicity

Compliance with the effluent limit for chronic toxicity means the results of the testing specified in subsection D. show no statistically significant difference in response between the control and the CCEC.

If the test results show a statistically significant difference in response between the control and the CCEC, the test does not comply with the effluent limit for chronic toxicity. The Permittee must then immediately conduct the additional testing described in subsection E. The Permittee will comply with the requirements of this section by meeting the requirements of subsection E.

The Permittee must determine the statistical significance by conducting a hypothesis test at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in response between the control and the CCEC is less than 20%, the Permittee must conduct the hypothesis test at the 0.01 level of significance.

Ecology will re-evaluate the need for the chronic toxicity limit in future permits. Therefore, the Permittee must also conduct this same hypothesis test (Appendix H, EPA/600/4-89/001) to determine whether a statistically significant difference in response exists between the acute critical effluent concentration (ACEC) and the control.

D. Compliance Testing for Chronic Toxicity

The Permittee must:

- Perform the chronic toxicity tests using the CCEC, the ACEC, and a control, or with a full dilution series.
- Submit a written report of all test results to Ecology within 60 days after each sample date. This written report must include the results of hypothesis testing conducted as described in subsection C. using both the ACEC and CCEC versus the control.

Perform compliance tests biannually using the following species on a rotating basis and the most recent version of the following protocols:

Saltwater Chronic Test Species		**Method**
Topsmelt	*Atherinops affinis*	EPA/600/R-95/136
Pacific Oyster/ Mussel	*Crassostrea gigas/ Mytilus sp.*	EPA/600/R-95/136
	Strongylocentrotus purpuratus/	

Saltwater Chronic Test Species		Method
Sea urchin/ Sand dollar survival and development	*Dendraster excentricus*	EPA/600/R-95/136

E. Response to Noncompliance With the Effluent Limit for Chronic Toxicity

If a toxicity test conducted under subsection D. determines a statistically significant difference in response between the CCEC and the control using the statistical test described in subsection C., the Permittee must begin additional testing within one week from the time of receiving the test results. The Permittee must:

1. Conduct additional testing each month for three consecutive months using the same test and species as the failed compliance test.

2. Use a series of at least five effluent concentrations and a control to determine appropriate point estimates. One of these effluent concentrations must equal the CCEC. The results of the test at the CCEC will determine compliance with the effluent limit for acute toxicity as described in subsection B.

3. Return to the original monitoring frequency in subsection C. after completion of the additional compliance monitoring.

Anomalous test results: If a toxicity test conducted under subsection D. indicates noncompliance with the acute toxicity limit and the Permittee believes that the test result is anomalous, the Permittee may notify Ecology that the compliance test result may be anomalous. The Permittee may take one additional sample for toxicity testing and wait for notification from Ecology before completing the additional testing. The Permittee must submit the notification with the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous.

If Ecology determines that the test result was not anomalous, the Permittee must complete all of the additional monitoring required in this subsection. Or,

If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee must complete all of the additional monitoring required in this subsection. Or,

If Ecology determines that the test result was anomalous, the one additional test result will replace the anomalous test result.

If all of the additional testing complies with the permit limit, the Permittee must submit a report to Ecology on possible causes and preventive measures for the transient toxicity event, which triggered the additional compliance monitoring. This report must include a search of all pertinent and recent facility records, including:

1. Operating records
2. Monitoring results
3. Inspection records
4. Spill reports
5. Weather records
6. Production records
7. Raw material purchases
8. Pretreatment records, etc.

If the additional testing shows violation of the acute toxicity limit, the Permittee must submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to Ecology within 60 days after the sample date (WAC 173-205-100(2)).

G. Sampling and Reporting Requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria.* Reports must contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data in electronic format for entry into Ecology's database, then the Permittee must send the data to Ecology along with the test report, bench sheets, and reference toxicant results.

2. The Permittee must collect 24-hour composite effluent samples or grab samples for toxicity testing. The Permittee must cool the samples to 0 - 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.

3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria.*

4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in subsection C. and the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria.* If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.

5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in subsection C. or pristine natural water of sufficient quality for good control performance.

6. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.

7. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the CCEC and the ACEC. The CCEC and the ACEC may either substitute for the effluent concentrations that are closest to them in the dilution series or be extra effluent concentrations. The CCEC equals 0.14% effluent. The ACEC equals 0.64% effluent.

8. All whole effluent toxicity tests that involve hypothesis testing must comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020. If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

9. Reports of individual characterization or compliance test results must be submitted to Ecology within 60 days after each sample date.

10. The Chronic Toxicity Summary Report must be submitted to Ecology with the permit renewal application.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

A. All applications, reports, or information submitted to Ecology must be signed and certified.

(a) In the case of corporations, by a responsible corporate officer.
For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(b) In the case of a partnership, by a general partner.

(c) In the case of sole proprietorship, by the proprietor.

(d) In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

Applications for permits for domestic wastewater facilities that are either owned or operated by, or under contract to, a public entity shall be submitted by the public entity.

B. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to Ecology.

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

C. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Certification. Any person signing a document under this section must make the following certification:

> I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.

B. To have access to and copy - at reasonable times and at reasonable cost - any records required to be kept under the terms and conditions of this permit.

C. To inspect - at reasonable times - any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.

D. To sample or monitor - at reasonable times - any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G3. PERMIT ACTIONS

Note: This section derived from 40 CFR 124.5, RCW 90.48.190, 195 and 173-220-150.

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon Ecology's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified

in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:

1. Violation of any permit term or condition.

2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.

3. A material change in quantity or type of waste disposal.

4. A determination that the permitted activity endangers human health or the environment or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination [40 CFR part 122.64(3)].

5. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR part 122.64(4)].

6. Nonpayment of fees assessed pursuant to RCW 90.48.465.

7. Failure or refusal of the permittee to allow entry as required in RCW 90.48.090.

B. The following are causes for modification but not revocation and reissuance except when the permittee requests or agrees:

1. A material change in the condition of the waters of the state.

2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.

3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.

4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.

5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.

6. Ecology has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.

7. Incorporation of an approved local pretreatment program into a municipality's permit.

C. The following are causes for modification or alternatively revocation and reissuance:

1. Cause exists for termination for reasons listed in A1 through A7, of this section, and Ecology determines that modification or revocation and reissuance is appropriate.

2. Ecology has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G8) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee.

G4. REPORTING PLANNED CHANGES

The Permittee must, as soon as possible, but no later than sixty (60) days prior to the proposed changes, give notice to Ecology of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in: 1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b); 2) a significant change in the nature or an increase in quantity of pollutants discharged; or 3) a significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G5. PLAN REVIEW REQUIRED

Note: The following is derived from RCW 90.48.110 and WAC 173-240-110(1)

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications must be submitted to Ecology for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications must be submitted at least one hundred eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities must be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit must be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee must notify the succeeding owner or controller of the existence of this permit by letter, a copy of which must be forwarded to Ecology.

A. Transfers by Modification

Except as provided in paragraph B below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

1. The Permittee notifies Ecology at least 30 days in advance of the proposed transfer date.
2. The notice includes a written agreement between the existing and new Permittee's containing a specific date transfer of permit responsibility, coverage, and liability between them.
3. Ecology does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under the subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G8. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, must control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G9. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G10. DUTY TO PROVIDE INFORMATION

The Permittee must submit to Ecology, within a reasonable time, all information which Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The

Permittee must also submit to Ecology upon request, copies of records required to be kept by this permit.

G11. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G12. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G13. PAYMENT OF FEES

The Permittee must submit payment of fees associated with this permit as assessed by Ecology.

G14. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit is deemed guilty of a crime, and upon conviction thereof will be punished by a fine of up to ten thousand dollars ($10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs is a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit must incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars ($10,000) for every such violation. Each and every such violation is a separate and distinct offense, and in case of a continuing violation, every day's continuance is deemed to be a separate and distinct violation.

G15. UPSET

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limits if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the

permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in condition S3.E; and 4) the Permittee complied with any remedial measures required under S4.C of this permit.

In any enforcement proceedings the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G16. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G17. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G18. TOXIC POLLUTANTS

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G19. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit will, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this Condition, punishment will be a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

G20. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS

The Permittee belonging to the categories of existing manufacturing, commercial, mining, or silviculture must notify Ecology as soon as they know or have reason to believe:

A. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels:"

    1. One hundred micrograms per liter (100 µg/L).

2. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.
3. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
4. The level established by the Director in accordance with 40 CFR 122.44(f).

B. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels:"

1. Five hundred micrograms per liter (500µg/L).
2. One milligram per liter (1 mg/L) for antimony.
3. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
4. The level established by the Director in accordance with 40 CFR 122.44(f).

G21. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than fourteen (14) days following each schedule date.

APPENDIX A
EFFLUENT CHARACTERIZATION FOR WASHINGTON STATE PRIORITY TOXIC CHEMICALS

EPA 307(A) REF. #	Pollutant & CAS No. *(if available)*	Recommended Analytical Protocol	Detection (DL)[1,2] *µg/L unless specified*	Quantitation Level (QL)[1,2] *µg/L unless specified*	Lowest Criteria Values *µg/L unless specified*
	Conventionals				
	Biochemical Oxygen Demand	405.1		2 mg/L	
	Chemical Oxygen Demand	410.1			
	Total Organic Carbon	5310 BCD		1 mg/L	
	Total Suspended Solids	2540 D		10 mg/L	
	Total Ammonia (as N)	4500-NH3- H			
	Flow	Calibrated device			
	Dissolved oxygen	4500-OC			
	Temperature (max. 7-day avg.)	Analog recorder or Use micro-recording devices known as thermistors			
	pH	150.1			
	Nonconventionals				
	Bromide (24959-67-9)	4110 B	100	400	
	Chlorine, Total Residual	4500 Cl G	10.0	40.0	7.5
	Color				
	Fecal Coliform				
	Fluoride (16984-48-8)	4500-F E	25	100	
	Nitrate-Nitrite (as N)	4500-NO2- I	2.5	10	10,000
	Nitrogen, Total Organic (as N)	4500-NO3- B	6.3	25	
	Ortho-Phosphorus (PO_4 as P)	4500-P G	0.8	3.0	
	Phosphorus, Total (as P)	200.8	0.25	1.0	
	Oil and Grease	1664A	1250	5,000	
	Radioactivity				
	Sulfate (as mg/l SO_4)	375.2	750	3,000	
	Sulfide (as mg/l S)	376.1	250	1000	2.0

EPA 307(A) REF. #	Pollutant & CAS No. *(if available)*	Recommended Analytical Protocol	Detection (DL)[1,2] *µg/L unless specified*	Quantitation Level (QL)[1,2] *µg/L unless specified*	Lowest Criteria Values *µg/L unless specified*
	Sulfite (as mg/l SO_3)	4500-SO3B	500	2,000	
	Surfactants	5540 C	2.5	10	
	Total dissolved solids	2540 D			500 mg/L[16]
	Aluminum, Total (7429-90-5)	200.8	0.15	0.6	750
	Barium Total (7440-39-3)	200.8	0.5	2.0	
	Boron Total (7440-42-8)	200.8(mod)	1.0	4.0	
	Cobalt, Total (7440-48-4)	200.8	0.03	0.12	
	Iron, Total (7439-89-4)	200.8	12.5	50	300
	Magnesium, Total (7439-95-4)	200.8(mod)	1.0	4.0	
	Molybdenum, Total (7439-98-7)	200.8(mod)	0.1	0.4	
	Manganese, Total (7439-96-5)	200.8(mod)	0.06	0.24	50
	Tin, Total (7440-31-5)	200.8(mod)	0.04	0.16	
	Titanium, Total (7440-32-6)	200.8(mod)	0.04	0.16	
	Metals, Cyanide & Total Phenols				
114	Antimony, Total (Inorganic) (7440-36-0)	200.8	0.08	0.3	14[5]
115	Arsenic, Total (dissolved) (7440-38-2)	200.8	0.9	3.6	36[7]
117	Beryllium, Total (7440-43-9)	200.8	0.1	0.4	4[8]
118	Cadmium, Total (7440-43-9)	200.8	0.1	0.4	0.37[3]
	Chromium (hex) dissolved (185-402-99)	200.8	0.4	1.6	10[7]
119	Chromium, Total (Tri) (7440-47-3)	200.8	0.07	0.28	57.2[3]
120	Copper, Total (7440-50-8)	200.8	0.03	0.12	3.1[3]
122	Lead, Total (7439-92-1)	200.8	0.08	0.32	0.54[3]
123	Mercury, Total (7439-97-6)	1631E	0.0001	0.0005	0.012[7]
124	Nickel, Total (7440-02-0)	200.8	0.2	0.8	8.2[3]
125	Selenium, Total (7782-49-2)	200.8	1.3	5.2	5[7]
126	Silver, Total (7440-22-4)	200.8	0.05	0.2	0.32[3]
127	Thallium, Total (7440-28-0)	200.8	0.09	0.36	1.7[5]
PSP	Tributyltin (688-73-3)	GC/MS[12]	0.001	0.004	0.0074[4]
128	Zinc, Total (7440-66-6)	200.8	0.3	1.0	32.3[3]
121	Cyanide, Total (7440-66-6)	335.4	1.3	5	1.0[7]
PSP	Phenols, Total	420.1	12.5	50	300[9]
	Dioxin				

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129	2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (176-40-16)	1613B	1.3 pg/L	5 pg/L	0.000000013[5]
	Volatile Compounds				
002	Acrolein (107-02-8)	624	12.5QL	50	320/780[5]
003	Acrylonitrile (107-13-1)	603	0.5	2.0	0.059/0.66[5]
004	Benzene (71-43-2)	624	0.07	0.28	5.0[8]
018	Bis(2-Chloroethyl)ether (111-44-4)	611/625	0.25	1.0	0.031[5]
042	Bis(2-Chloroisopropyl) ether (108-60-1)	611/625	0.03	0.10	1400[5]
047	Bromoform (75-25-2)	624	4.7	19.0	4.3[5]
006	Carbon tetrachloride (108-90-7)	624/601 or SM6230B	0.12	0.5	0.25[5]
007	Chlorobenzene (108-90-7)	624	6.0	24.0	680[5]
016	Chloroethane (75-00-3)	624/601	0.52	2.0	
019	2-Chloroethylvinyl Ether (110-75-8)	624	50 QL		3540[10]
023	Chloroform (67-66-3)	624 or SM6210B	1.6	6.4	5.7[5]
051	Dibromochloromethane (124-48-1)	624	0.09	0.36	0.41[5]
048	Dichlorobromomethane (75-27-4)	SM6200B	0.112	0.45	0.27[5]
013	1,1-Dichloroethane (75-34-3)	624	4.7	18.8	
010	1,2-Dichloroethane (107-06-2)	601	0.03	0.12	0.38[5]
029	1,1-Dichloroethylene (75-35-4)	SM6200C	0.035	0.14	0.057[5]
032	1,2-Dichloropropane (78-87-5)	624	6	24	3[13]
033	1,3-dichloropropylene (mixed isomers) (542-75-6)	624	5	20	10[5]
038	Ethylbenzene (100-41-4)	624	7.2	29.0	3100[5]
046	Methyl bromide (74-83-9) (Bromomethane)	624/601	1.2	4.8	48[5]
045	Methyl chloride (74-87-3) (Chloromethane)	601	0.08	0.32	270000[13]
044	Methylene chloride (75-09-2)	624	2.8	11.2	4.7[5]
015	1,1,2,2-Tetrachloroethane (79-34-5)	601	0.03	0.12	0.17[5]
085	Tetrachloroethylene (127-18-4)	SM6200B	0.047	0.19	0.80[5]
086	Toulene (108-88-3)	624	6	24	6800[5]
030	1,2-Trans-Dichloroethylene (156-60-5) (Ethylene dichloride)	624	1.6	6.4	700[4]
011	1,1,1-Trichloroethane (71-55-6)	624	3.8	15.2	200[8]

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014	1,1,2-Trichloroethane (79-00-5)	601	0.02	0.08	0.6[5]
087	Trichloroethylene (79-01-6)	624	1.9	7.6	2.7[5]
	Trichlorofluoromethane (75-69-4)	624	0.06	0.24	-
088	Vinyl chloride (75-01-4)	624/SM6200B	0.12	0.48	2[5]
	Acid Compounds				
PSP	Bisphenol A (80-05-7)	625	0.3	1.2	0.9[13]
024	2-Chlorophenol (95-57-8)	625	3.3	13.2	81[4]
031	2,4-Dichlorophenol (120-83-2)	625	2.7	10.8	93[5]
034	2,4-Dimethylphenol (105-67-9)	625	2.7	10.8	380[4]
060	4,6-dinitro-o-cresol (534-52-1) (2-methyl-4,6,-dinitrophenol)	625/1625B	5	20	13.4[5]
059	2,4 dinitrophenol (51-28-5)	625	42	168	70[5]
057	2-Nitrophenol (88-75-5)	625	3.6	14.4	450[13]
058	4-nitrophenol (100-02-7)	625	2.4	9.6	600[13]
PSP	Nonylphenol, total (104-40-5)	625	0.9	5.0	7
022	Parachlorometa cresol (59-50-7) (4-chloro-3-methylphenol)	625	3.0	12.0	-
064	Pentachlorophenol (87-86-5)	604 (ECD)	0.005	0.021[11]	0.28[5]
065	Phenol (108-95-2)	625	1.5	6.0	21000[5]
021	2,4,6-Trichlorophenol (88-06-2)	604(ECD)	0.58	2.3	2.1[5]
	Base/Neutral Compounds				
001	Acenaphthene (83-32-9)	625	1.9	7.6	670[6]
077	Acenaphtylene (208-96-8)	625	3.5	14.0	132000[13]
078	Anthracene (120-12-7)	625	1.9	7.6	9600[5]
005	Benzidine (92-87-5)	605	0.08	0.32	0.00012[5]
067	Benzyl butyl phthalate (85-68-7)	625	2.5	10.0	1500
072	Benzo(*a*)anthracene (56-55-3)	610	0.013	0.05	0.0028[5]
PBT	Benzo(j)fluoranthene (205-82-3)	610M/625M	0.02	0.08	-
PBT	Benzo(r,s,t)pentaphene (189-55-9)	610M/625M	0.02	0.08	
073	Benzo(*a*)pyrene (50-32-8)	610/625	0.023	0.09	0.0028/0.031[5]
074	3,4-benzofluoranthene (Benzo(b)fluoranthene) (205-99-2)	610/625	0.018	0.07	
075	11,12-benzofluoranthene (Benzo(k)fluoranthene) (207-08-9)	610/625	0.017	0.07	0.0028/0.031[5]
079	Benzo(*ghi*)Perylene (191-24-2)	610/625	0.076	0.30	0.1[13]
043	Bis(2-*chloroethoxy*)methane (111-	625	5.3	21.2	92000[13]

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	91-1)				
018	Bis(*2-chloroethyl*)ether (111-44-4)	611/625	0.3	1.2	0.031[5]
042	Bis(*2-chloroisopropyl*)ether (108-60-1)	625	5.3	21.2	1400[5]
066	Bis(*2-ethylhexyl*)phthalate (117-81-7)	625	2.5	10.0	1.8[5]
070	Butyl benzyl phthalate	625	0.25	1.0	1500
041	4-Bromophenyl phenyl ether (101-55-3)	625	1.9	7.6	180[13]
020	2-Chloronaphthalene (91-58-7)	625	1.9	7.6	1000[6]
040	4-Chlorophenyl phenyl ether (7005-72-3)	625	4.2	16.8	365[13]
076	Chrysene (218-01-9)	610/625	0.15	0.6	0.0028[5]
PSP	7H-Dibenzo(c,g)carazole (194-59-2)	610M/625M	0.25	1.0	-
PBT	Dibenzo (a,j)acridine (224-42-0)	610M/625M	2.5	10.0	-
PBT	Dibenzo (a,h)acridine (226-36-8)	610M/625M	2.5	10.0	-
082	Dibenzo(a-*h*)anthracene (53-70-3) (1,2,5,6-dibenzanthracene)	625	2.5	10.0	2700[5]
PBT	Dibenzo(a,e)pyrene (192-65-4)	610M/625M	2.5	10.0	-
PBT	Dibenzo(a,h)pyrene (189-64-0)	625M	2.5	10.0	
025	1,2-Dichlorobenzene (95-50-1)	625	1.9	7.6	2700[5]
026	1,3-Dichlorobenzene (541-73-1)	625	1.9	7.6	400[5]
027	1,4-Dichlorobenzene (106-46-7)	625	4.4	17.6	400[5]
028	3,3'-Dichlorobenzidine (91-94-1)	605/625	0.13	0.52	0.04[5]
PSP	1,2-Dichloropropane (788-7-5)	624	0.15	0.6	0.50[6]
070	Diethyl phthalate (84-66-2)	625	1.9	7.6	23000[5]
071	Dimethyl phthalate (131-11-3)	625	1.6	6.4	313000[5]
068	Di-n-butyl phthalate (84-74-2)	625	2.5	10.0	2700[5]
035	2,4-dinitrotoluene (121-14-2)	609	0.01	0.04	0.11[5]
036	2,6-dinitrotoluene (606-20-2)	609/625	0.01	0.04	6250[19]
069	Di-n-octyl phthalate (117-84-0)	625	2.5	10.0	3.1[19]
037	1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)	625	10	40.0	0.04[5]
039	Fluoranthene (206-44-0)	625	2.2	8.8	300[5]
080	Fluorene (86-73-7)	625	1.9	7.6	1300[5]

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009	Hexachlorobenzene (118-74-1)	612/625	0.05	0.2	0.00075[5]
052	Hexachlorobutadiene (87-68-3)	625	0.09	0.36	0.44[5]
053	Hexachlorocyclopentadiene (77-47-4)	1625B/625	2.5	10	240[5]
012	Hexachloroethane (67-72-1)	625	1.6	6.4	1.9[5]
083	Indeno(*1,2,3-cd*)Pyrene (193-39-5)	610/625	0.043	0.17	0.0028[6]
054	Isophorone (78-59-1)	625	2.2	8.8	8.4[5]
PBT	3-Methyl cholanthrene (56-49-5)	625	2.0	8.0	
055	Naphthalene (91-20-3)	625	1.6	6.4	400[13]
056	Nitrobenzene (98-95-3)	625	1.9	7.6	17[5]
PSP	N-Nitrosodibutylamine (924-16-3)	625	10	40	0.005[15]
PSP	N-Nitrosodiethylamine (55-18-5)	625	10	40	0.0008[14]
061	N-Nitrosodimethylamine (62-75-9)	607/625	0.04	0.15	0.00069[5]
063	N-Nitrosodi-n-propylamine (621-64-7)	607/625	0.12	0.46	0.005[5]
062	N-Nitrosodiphenylamine (86-30-6)	625	1.9	7.6	5[5]
PSP	Pentachlorobenzene (608-93-5)	625	1.9	7.6	0.154[6]
PBT	Perylene (198-55-0)	625	1.9	7.6	
081	Phenanthrene (85-01-8)	625	5.4	21.6	4[13]
084	Pyrene (129-00-0)	625	1.9	7.6	960[5]
008	1,2,4-Trichlorobenzene (120-82-1)	625	1.9	7.6	35[6]
	GC/MS Fraction - Pesticides				
089	Aldrin (309-00-2)	608	0.004	0.016	0.00013[5]
102	alpha-BHC (319-84-6)	608	0.003	0.012	0.0039[5]
103	beta-BHC (319-85-7)	608	0.006	0.024	0.014[5]
104	gamma-BHC (58-89-9)	608	0.009	0.036	0.019[5]
105	delta-BHC (319-86-8)	608	0.004	0.016	7.0[13]
091	Chlordane (57-74-9)	608	0.014	0.056	0.00057[5]
092	4,4'-DDT (50-29-3)	608	0.012	0.048	0.00059[5]
093	4,4'-DDE (72-55-9)	608	0.001	0.003[11]	0.00059[5]
094	4,4' DDD (72-54-8)	608	0.011	0.044	0.00083[5]
PSP	Diazinon (333-41-5)	614/1657	0.0013	0.005[11]	0.17[4]
090	Dieldrin (60-57-1)	608	0.002	0.008	0.00014[5]
095	alpha-Endosulfan (959-98-8)	608	0.014	0.056	0.0087[5]
096	beta-Endosulfan (33213-65-9)	608	0.004	0.016	0.0087[5]

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097	Endosulfan Sulfate (1031-07-8)	608	0.066	0.26	0.093[5]
098	Endrin (72-20-8)	608	0.006	0.024	0.0023[5]
099	Endrin Aldehyde (7421-93-4)	608	0.023	0.092	0.76[5]
100	Heptachlor (76-44-8)	608	0.003	0.012	0.00021[5]
101	Heptachlor Epoxide (1024-57-3)	608	0.083	0.33	0.00010[5]
PSP	Parathion (56-38-2)	614/1657	0.003	0.01[11]	0.013[7]
106	PCB-1242 (53469-21-9)	608	0.065	0.26	0.000170[5]
107	PCB-1254 (11097-69-1)	625	36	144	0.000170[5]
108	PCB-1221 (11104-28-2)	625	30	120	0.000170[5]
109	PCB-1232 (11141-16-5)	608	0.13	0.5	0.000170[5]
110	PCB-1248 (12672-29-6)	608	0.13	0.5	0.000170[5]
111	PCB-1260 (11096-82-5)	608	0.13	0.5	10.5[13]
112	PCB-1016 (12674-11-2)	608	0.13	0.5	0.42[13]
113	Toxaphene (8001-35-2)	608	0.24	0.96	0.00073[5]

PBT - Denotes a State of Washington toxic compound or additional parameter.

PSP – Puget Sound Pollutant

1. The DL and QL values were obtained from USEPA Region 10 (as compiled from 40 CFR Part 136), from Ecology Laboratory Manual, or from sources noted by other footnote. USEPA Region 10 compiled their list from the Methods Update Rule (MUR) FR vol. 72, no. 47, Monday, March 12, 2007. Parameter #53 in Table 1c of the MUR was published as 2,3-dinitrophenol which is technically incorrect; parameter #53 should have been listed as 2,4-dinitrophenol and appears corrected here.

   Methods have different ways to express detection limits and quantification limits. When a method published sensitivity information it was listed as a detection limit (DL); when a method indicated an instrument detection limit (IDL) that too was identified as a detection limit (DL). When a method was published with method detection limits (MDL) as per 40 CFR 136 Appendix B, then these limits were listed under MDL. When a method published a working or operational concentration range then the lowest value for that range was used to in the column called LLCR or lowest level of the concentration range. When a method published minimum levels, then these were listed under ML. Where only a DL or QL was provided the corresponding QL or DL was estimated by multiplying by 4 (or 0.25).
2. Detection level (DL) or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.

Appendix A

Quantitation Level (QL) is equivalent to EPA's Minimum Level (ML) which is defined in 40 CFR Part 136 as the minimum level at which the entire GC/MS system must give recognizable mass spectra (background corrected) and acceptable calibration points. These levels were published as proposed in the Federal Register on March 28, 1997.

3. This criterion is dependent upon receiving water characteristics. This value is the aquatic life chronic value at a hardness of 25 mg/l
4. EPA 822-R-03-031
5. Human health criteria as fresh or marine – EPA National Toxic Rule
6. Fresh water aquatic life as Acute or Chronic – EPA recommended values
7. Aquatic life as Acute or Chronic – WAC 173-201A
8. USEPA Drinking Water Criteria
9. Taste and odor criteria
10. No human health based screening levels were available for 2-chloroethylvinyl ether. This value is the surface water screening values derived by U.S. EPA Region 4 Water Management Division. These values were obtained from Water Quality Criteria documents and represent the chronic ambient water quality criteria values for the protection of aquatic life.
11. USGS 2004-5194. Pesticides Detected in Urban Streams in King County, Washington, 1998–2003.
12. Virginia Institute of Marine Science. 1996. A Manual for the Analysis of Butyltins in Environmental Samples.
13. Estimated effect level
14. Report on Carcinogens. 11th Edition. National Institute of Health, 2007.
15. EPA Region 10 criteria approval, Warm Springs Confederated Tribes. 2006.
16. Chapter WAC 173-200.

Appendix A